

BIMETALLIC PLATE-FIN TITANIUM BASED HEAT EXCHANGER

ABSTRACT OF THE DISCLOSURE

5 A heat exchanger of the plate-fin type has fins of one metal brazed to a
plate made of a different metal for use in oil coolers, condensers, evaporators,
and the like. The distortion-prone titanium fins of conventional heat exchangers
may be replaced with another metal, such as a stainless steel or a nickel based
10 alloy to provide a structure that is resistant to crushing at the brazing
temperature. Fluid or air flow resistance (pressure drop) through the heat
exchanger may also be improved if the selected fin metal forms better fin
shapes and has fewer burrs than conventional titanium fins. The replacement
material may also improve the heat transfer performance of the heat exchanger
if the selected fin metal has higher thermal conductivity than titanium.